+T,0450

SEQUENCE LISTING

(1) GENERAL INFORMATION:

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(ii) TITLE OF INVENTION: HUMAN ANTIBODIES DERIVED FROM IMMUNIZED XENOMICE

(iii) NUMBER OF SEQUENCES: 21

(iv) CORRESPONDENCE ADDRESS:
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(v) COMPUTER READABLE FORM:
(A) MEDIUM TYPE: Floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: PatentIn Release #1.0, Version #1.30

(vi) CURRENT APPLICATION DATA:
(A) APPLICATION NUMBER: US 08/724,752
(B) FILING DATE: 02-DEC-1996
(C) CLASSIFICATION:

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(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 259 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

AGACCCTCTC ACTCACCTGT GCCATCTCCG GGGACAGTGT CTCTAGCAAC AGTGCTGCTT 60

GGAACTGGAT CAGGCAGTCC CCATCGAGAG GCCTTGAGTG GCTGGGAAGG ACATACTACA 120

GGTCCAAGTG GTATAATGAT TATGCAGTAT CTGTGAAAAG TCGAATAACC ATCAACCCAG 180

ACACATCCAA GAACCAGTTC TCCCTGCAGC TGAACTCTGT GACTCCCGAG GACACGGCTG 240

TGTATTACTG TGCAAGAGA 259

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 400 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

AGACCCTCTC ACTCACCTGT GCCATCTCCG GGGACAGTGT CTCTAGCGAC AGTGCTGCTT 60

GGAACTGGAT CAGGCAGTCC CCATCGAGAG GCCTTGAGTG GCTGGGAAGG ACATACTACA 120

GGTCCAAGTG GTATAATGAT TATGCAGTTT CTGTGAAAAG TCGAATAACC ATCAACCCAG 180

ACACATCCAA GAACCAGTTC TCCCTGCAGC TGAACTCTGT GACTCCCGAG GACACGGCTG 240

TGTATTACTG TGCAAGAGAT ATAGCAGTGG CTGGCGTCCT CTTTGACTGC TGGGGCCAGG 300

GAACCCTGGT CACCGTCTCC TCAGGGAGTG CATCCGCCCC AACCCTTTTC CCCCTCGTCT 360

CCTGTGAGAA TTCCCCGTCG GATACGAGCA GCGTGGCCGT 400

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 43 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

CTTGACTAGC TGGGGCCAAG GAACCCTGGT CACCGTCTCC TCA 43

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 15 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

TATAGCAGCA GCTGG 15

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 77 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

GGGAGTGCAT CCGCCCCAAC CCTTTTCCCC CTCGTCTCCT GTGAGAATTC CCCGTCGGAT 60

ACGAGCAGCG TGGCCGT 77

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 302 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

GACATCGTGA TGACCCAGTC TCCAGACTCC CTGGCTGTGT CTCTGGGCGA GAGGGCCACC 60

ATCAACTGCA AGTCCAGCCA GAGTGTTTTA TACAGCTCCA ACAATAAGAA CTACTTAGCT 120

TGGTACCAGC AGAAACCAGG ACAGCCTCCT AAGCTGCTCA TTTACTGGGC ATCTACCCGG 180

GAATCCGGGG TCCCTGACCG ATTCAGTGGC AGCGGGTCTG GGACAGATTT CACTCTCACC 240

ATCAGCAGCC TGCAGGCTGA AGATGTGGCA GTTTATTACT GTCAGCAATA TTATAGTACT 300

CC 302

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 442 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

ACCATCAAGT GCAAGTCCAG CCAGAGTGTT TTGTACACTT CCAGCAATAA GAACTACTTA 60

GCTTGGTACC AGCAGAAACC AGGACAGCCT CCTAAACTAC TCATTTACTG GGCATCTACC 120

CGGGAATCCG GGGTCCCTGA CCGATTCAGT GGCAGCGGGT CTGGGACAGA TTTCACTCTC 180

ACCATCCGCA GCCTGCAGGC TGAAGATGTG GCAGTTTATT ACTGTCAGCA ATATTATACT 240

ATTCCATTCA ATTTCGGCCC TGGGACCAGA GTGGATATCA AACGAACTGT GGCTGCACCA 300

TCTGTCTTCA TCTTCCCGCC ATCTGATGAG CAGTTGAAAT CTGGAACTGC CTCTGTTGTG 360

TGCCTGCTGA ATAACTTCTA TCCCAGAGAG GCCAAAGTAC AGTGGAAGGT GGATAACGCC 420

CTCCAATCGG GTTGGGGAAA AA 442

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 38 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

ATTCACTTTC GGCCCTGGGA CCAAAGTGGA TATCAAAC 38

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 149 base pairs

(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

GAACTGTGGC TGCACCATCT GTCTTCATCT TCCCGCCATC TGATGAGCAG TTGAAATCTG 60

GAACTGCCTC TGTTGTGTGC CTGCTGAATA ACTTCTATCC CAGAGAGGCC AAAGTACAGT 120

GGAAGGTGGA TAACGCCCTC CAATCGGGT 149

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 399 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

CCTGTCCCTC ACCTGCGCTG TCTATGGTGG GTCCTTCAGT GGTTACTACT GGAGCTGGAT 60

CCGCCAGCCC CCAGGGAAGG GACTGGAGTG GATTGGGGAA ATCAATCAAA GTGGAAGCAC 120

CAATTACAAC CCGTCCCTCA AGAGTCGAGT CATCATATCA ATAGACACGT CCAAGACCCA 180

GTTCTCCCTG AAGTTGAGCT CTGTGACCGC CGCGGACACG GCTGTGTATT ACTGTGCGAG 240

AGAGACTCCC CATGCTTTTG ATATCTGGGG CCAAGGGACA ATGGTCACCG TCTCTTCAGC 300

CTCCACCAAG GGCCCATCGG TCTTCCCCCT GGCGCCCTGC TCCAGGAGCA CCTCCGAGAG 360

CACAGCGCGC CCTGGGCTGC CTGGTCAAGG ACTACTTCC 399

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 444 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

CAGTCTCCAT CCTCCCTGTC TGCATCTGTA GGCGACAGAG TCACCATCAC TTGCCAGGCG 60

AGTCAGGACA TTAGTAAGTT TTTAAGTTGG TTTCAACAGA AACCAGGGAA AGCCCCTAAA 120

CTCCTGATCT ACGGTACATC CTATTTGGAA ACCGGGGTCC CATCAAGTTT CAGTGGAAGT 180

GGATCTGGGA CAGATTTTAC TCTCACCATC AGCAGCCTGC AGCCTGAAGA TGTTGCAACA 240

TATTTCTGTA ACAGNATGAT GATCTCCCAT ACACTTTCGG CCCTGGGACC AAAGTGGATA 300

TCAAACGAAC TGTGGCTGCA CCATCTGTCT TCATCTTCCC GCCATCTGAT GAGCAGTTGA 360

AATCTGGAAC TGCCTCTGTT GTGTGCCTGC TGAATAACTT CTATCCCAGA GAGGCCAAAG 420

TACAGTGGAA GGTGGATAAC GCCC 444

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 453 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

AGGTCCCTGA GACTCTCCTG TGCAGCCTCT GGATTCACCT TCAGTAGCTA TGGCATGCAC 60

TGGNTCCGCC AGGCTCCAGG CAAGGGGCTG GAGTGGGTGG CAGAAATATC ATATGATGGA 120

AGTAATAAAT ACTATGTAGA CTCCGTGAAG GGCCGACTCA CCATCTCCAG AGACAATTCC 180

AAGAACACGC TGTATCTGCA AATGAACAGC CTGAGAGCTG AGGACACGGC TGTGTATTAC 240

TGTGCGAGAG ACCGACTGGG GATCTTTGAC TACTGGGGCC AGGGAACCCT GGTCACCGTC 300

TCCTCAGCCT CCACCAAGGG CCCATCGGTC TTCCCCCTGG CGCCCTGCTC CAGGAGCACC 360

TCCGAGAGCA CAGCGCGGCC CTGGGCTGCC TGGTCCAAGG ACTACTTCCC CCGAACCGGT 420

GACGGTGTCG TGGAACTCAG GCGCTCTGAC CAG 453

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 470 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

CTGACNCAGT CTCCAGACTC CCTGGCTGTG TCTCTGGGCG AGAGGGCCAC CATCAACTGC 60

AAGTCCAGCC AGAGTGTTTT ATACATCTCC AACAATAAAA CTACTTAGCT TGGTACCAGC 120

AGAAACCAGG ACAGTCTCCT AAACTGCTCA TTTACTGGGC ATCTACCCGG AAATCCGGGG 180

TCCCTGACCG ATTCAGTGGC AGCGGGTCTG GGACAGATTT CACTCTCACC ATCAGCAGCC 240

TGCAGGCTGA AGATGTGGCA GTTTATTACT GTCAACAGTA TTATGATACT CCATTCACTT 300

TCGGCCCTGG GACCAAAGTG GATATCAAAC GAACTGTGGC TGCACCATCT GTCTTCATCT 360

TCCCGCCATC TGATGAGCAG TTGAAATCTG GAACTGCCTC TGTTGTGTGC CTGCTGAATA 420

ACTTCTATCC CAGAGAGGCC AAAGTACAGT GGAAGGTGGN TAACGCCCCA 470

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 462 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

TCCCTCACCT GCGCTGTCTA TGGTGGGTCC TTCAGTGGTT ACTACTGGAC CTGGATCCGC 60

CAGCCCCCAG GGAAGGGGCT GGAGTGGATT GGGGAAATCA TTCATCATGG AAACACCAAC 120

TACAACCCGT CCCTCAAGAG TCGAGTCTCC ATATCAGTTG ACACGTCCAA GAACCAGTTC 180

TCCCTGACAC TGAGCTCTGT GACCGCCGCG GACACGGCTG TGTATTACTG TGCGAGAGGG 240

GGAGCAGTGG CTGCGTTTGA CTACTGGGGC CAGGGAACCC TGGTCACCGT CTCCTCAGCC 300

TCCACCAAGG GCCCATCGGT CTTCCCCCTG GCGCCCTGCT CCAGGAGCAC CTCCGAGAGC 360

ACAGCGCGGC CCTGGGCTGC CTGGTCAAGG ACTACTTCCC CCGAACCGGT GACGGTGTCG 420

TGGAACTCAG GCGCTCTGAC CAGCGGCGTG CACACCTTCC CA 462

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 437 base pairs

(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

TGACCCAGTC TCCATCCTCC CTGTCTGCAT CTGTAGGAGA CAGAGTCACC ATCACTTGCC 60

AGGCGAGTCA GGACATTAGT AACTATTTAA ATTGGTATCA ACAGAAAGCA GGGAAAGCCC 120

CTAAGGTCCT GATCTACGCT GCATCCAATT TGGAAGCAGG GGTCCCATCA AGGTTCAGTG 180

GAAGTGGATC TGGGACAGAT TTTACTTTCA CCATCAGCAG CCTGCAGCCT GAAGATATTG 240

CAACATATTA TTGTCAACAC TATGATAATC TACTCACTTT CGGCGGAGGG ACCAAGGTAG 300

AGATCAAACG AACTGTGGCT GCACCATCTG TCTTCATCTT CCCGCCATCT GATGAGCAGT 360

TGAAATCTGG ACTGCCTCTG TTGTGTGCCT GCTGAATAAC TTCTATCCCA GAGAGGCCAA 420

AGTACAGTGG AAGGTGG 437

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 477 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

AGTCTCTGAA GATCTCCTGT AAGGGTTCTG GATACAGCTT TACCAGCTAC TGGATCGGCT 60

GGGTGCGCCA GATGCCCGGG AAAGGCCTGG AGTGGATGGG GATCATCTAT CCTGGTGACT 120

CTGATACCAG ATACAGCCCG TCCTTCCAAG GCCAGGTCAC CATCTCAGCC GACAAGTCCA 180

TCAGCACCGC CTACCTGCAG TGGAGCAGCC TGAAGGCCTC GGACACCGCC ATGTATTACT 240

GTGCGAGACA GGACGGTGAC TCCTTTGACT ACTGGGGCCA GGGAACCCTG GTCACCGTCT 300

CCTCAGCCTC CACCAAGGGC CCATCGGTCT TCCCCCTGGC GCCCTGCTCC AGGAGCACCT 360

CCGAGAGCAC AGCGCGGCCC TGGGCTGCCT GGTCCAAGGA CTACTTCCCC CGAACCGGTG 420

ACGGTGTCGT GGAACTCAGG CGCTCTGACC AGCGGCGTGC ACACCTTCCC ACTGCCA 477

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 410 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

TGTCTGCATC TATTGGAGAC AGAGTCACCA TCACTTGCCG GGCAAGTCAG AGCATTAGCA 60

ACTATTTAAA TTGGTATCAG CAGAAACCAG GGCAAAGCCC CTAAGTTCCT GATCTATGGT 120

GCATCCAGTT TGGAAAGTGG GGTCCCATCA NGGTTCAGTG GCAGTGGATC TGGGACAGAT 180

TTCACTCTCA CCATCAGCAG CCTGCAACCT GNGGATTTTG CAACTTACTA CTGTCAACAG 240

AGTTACAGTA ACCCTCTCAC TTTCGGCGGN GGGACCAANG TGGAGATCAA ACGAACTGTG 300

GCTGCACCAT CTGTCTTCAT CTTCCCGCCA TCTGATGAGC AGTTGAAATC TGGAACTGCC 360

TCTGTTGTGT GCCTGCTGAA TAACTTCTAT CCCAGAGAGG CCAAAGTACA 410

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

CTCTGTGACA CTCTCCTGGG AGTT 24

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 26 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

GAAACGACAC TCACGCAGTC TCCAGC 26

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

TTTTCTTTGT TGCCGTTGGG GTGC 24

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 28 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

GCTGAGGGAG TAGAGTCCTG AGGACTGT 28